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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/771,573

02/03/2004

Kumar Rajamani

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3732

29989

7590

02/17/2006

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EXAMINER

SCHLIE, PAUL W

ART UNIT

PAPER NUMBER

2186

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/771,573	<b>Applicant(s)</b> RAJAMANI ET AL.	
	<b>Examiner</b> Paul W. Schlie	<b>Art Unit</b> 2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1-42 have been examined.

***Claim Rejections - 35 USC § 112***

2. Claim 1 and thereby remaining claims 2-42 are rejected under 35 U.S.C. 112, first paragraph, because the specification while being sufficient to be considered enabling for the explicit allocation of logical main memory as depicted in figure 10, as the methods by which logically addressable memory may be allocated are well understood by those of ordinary skill in the art, it does not reasonably enable the explicit allocation of a processor's cache memory. As a processor's cache memory is typically considered implicitly allocated by those of ordinary skill in the art, typically mirroring sub-portions of a logical address space allocated within main memory to improve the overall access efficiency to data logically allocated within main memory as function of its historical and/or speculative subsequent reference. Therefore the specification is not considered to enable one of ordinary skill in the art to which it pertains, or with which it is most nearly connected, to implement the invention commensurate in scope with these claims without likely undue experimentation. Corrective action is required, however the applicant is reminded that no new matter may be added to the disclosure that is not supported by the original specification.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-42 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mellender et al. (4,989,132).

6. As per independent claim 1, Mellender et al. teaches that the standard C library routines malloc and free may be utilized to manage the logical allocation of buffer memory as may be required to store any arbitrary data structure for use within a database implementation distinct from the means by which cache may be allocated to mirror data stored within such allocated logical memory in an effort to improve it's effective access efficiency upon demand (see column 57 lines 34-36). Any limitation not otherwise explicitly addressed is considered obviously inherent in that taught, clearly obvious to one of ordinary skill in the art at the time of the claimed invention, and/or not sufficient to patentably distinguish over prior art.

As per claims 2-42, being dependant on claim 1, or correspondingly dependant claim inclusively, in light of that taught by Mellender et al., and that official notice is given that as the standard C library routine is defined to manage the allocation of memory buffers based upon the size of the logical buffer required and available logical memory, and which may then be made available for subsequent allocation upon being

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freed; it is correspondingly considered inherent that the implementation and/or use of malloc/free comprises: the apriority determination of a required buffer size to be requested to be allocated based upon any criteria which defines the size and/or quantity of the data structures which need to be stored in the buffer requested to be allocated as may be correspondingly inherently required by any particular implementation; the generation of a table or similar data structure by which free and allocated buffer memory may be managed as required to enable their consistent allocation and/or reclamation; an indication that a request for a buffer of greater size than available to be allocated, has not been allocated; that memory buffers managed by malloc may be characterized and correspondingly sub-managed by their size and/or relative logical location. All limitations not otherwise explicitly addressed are correspondingly considered obviously inherent in that taught, clearly obvious to one of ordinary skill in the art at the time of the claimed invention, and/or not sufficient to patentably distinguish over prior art.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul W. Schlie whose telephone number is 571-272-6765, or email address [paul.schlie@uspto.gov]. The examiner can normally be reached on Mon-Thu 8:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on 517-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**PIERRE BATAILLE**  
**PRIMARY EXAMINER**

2/15/06